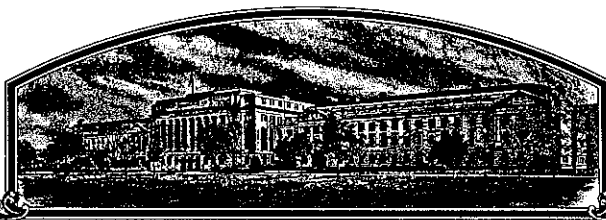


No.

8600107



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A7986'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 31st day of December in the year of our Lord one thousand nine hundred and eighty-six.

Attest:

Kenneth H. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Richard E. Lyng
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) ASGROW SEED COMPANY		2. TEMPORARY DESIGNATION XP8186		3. VARIETY NAME A7986	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Unit 9620 190 25 20 Kalamazoo, MI 49001		5. PHONE (Include area code) 616 385 6605		FOR OFFICIAL USE ONLY PVPO NUMBER 8600107	
6. GENUS AND SPECIES NAME Glycine max.		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE April 14, 1986 TIME 10:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Soybean		9. DATE OF DETERMINATION 1982 - September		AMOUNT FOR FILING \$ 1800. DATE April 14, 1986	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				AMOUNT FOR CERTIFICATE \$ 200.00 DATE November 6, 1986	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware				12. DATE OF INCORPORATION March 22, 1968	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS John Batcha Asgrow Seed Company 9620 190 25 20 Kalamazoo, MI 49001 PHONE (Include area code): 616 385 6605					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.					
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)					
d. <input type="checkbox"/> Exhibit D, Additional Description of Variety.					
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT John A. Batcha				DATE April 1, 1986	
SIGNATURE OF APPLICANT				DATE	

ORIGIN AND BREEDING HISTORY

- SUMMER 1978 - Original cross made at Caruthersville, MO.
Cross number was M78-687. Parentage is Young *
Braxton.
- WINTER 1978-79 - F1 plants grown under artificial lights in
Belize, Central America.
- SUMMER 1979 - F2 advanced to F3 by single seed descent at
Caruthersville, MO.
- WINTER 1979-80 - F3 advanced to F4 in Belize by single
plant descent.
- SUMMER 1980 - F4 bulks of M79-687 were grown at Marion, AR.
- SUMMER 1981 - F5 progeny rows of M78-687 were grown at
Marion, Arkansas and 1981 row 09886 was
selected and composited.
- SUMMER 1982 - Yield tested in test P751 as entry 21 at
Greenville, Mississippi and Winnsboro,
Louisiana.
- SUMMER 1983 - Yield tested at 5 locations in test V741 as
entry 8. Forty-eight F7 plants were pulled
from a separate plot for breeder seed
purification. Entry V741-08 labeled as XP8186.
- SUMMER 1984 - X8186 yield tested at 6 locations in test V741
as entry 9. Forty-eight rows uniform for
maturity, height, and flower color were bulked
for breeder seed and found to be stable and
unique. X8186 was designated as XP8186.
- WINTER 1984-85 - Forty (40) pounds of breeder seed was
planted in Puerto Rico for increase with 22
bushels of seed harvested.
- SUMMER 1985 - XP8186 was tested in eight environments.
Superior yield and lodging resistance continued
to be noted for this line compared to cultivars
of similar maturity. Breeder seed was
increased to 1,500 units of Basic I seed.
XP8186 was released and designated as A7986.

Asgrow Seed Company
Plant Variety
Protection Application Soybean A7986
April 1, 1986

8600107

Exhibit A (Cont'd)

Evaluation since 1982 indicates A6785 is uniform and stable within commercially acceptable limits. As with other soybean varieties, offtypes and variants can occur for any characteristic during the course of repeated sexual multiplications.

Asgrow Seed Company
Plant Variety
Protection Application Soybean A7986
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8600107

EXHIBIT B

NOVELTY STATEMENT

To our knowledge A7986 most resembles the cultivars Coker 368 and DPL 417. It differs from these cultivars in that A7986 has purple flowers and flowers of DPL 417 and Coker 368 are white.

April, 1986

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	TEMPORARY DESIGNATION XP8186	VARIETY NAME A7986
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) Unit 9620 190 25 Kalamazoo, MI 49001		FOR OFFICIAL USE ONLY PVPO NUMBER 8600107

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,).

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow 2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low 2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a) 2 = Type B (SP1^b)

9. HYPOCOTYL COLOR:



1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Rickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

11. LEAFLET SIZE:

☒ 21 = Small ('Amsoy 71'; 'A5312')
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☒ 21 = Light Green ('Weber'; 'York')
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

13. FLOWER COLOR:

☒ 2

1 = White 2 = Purple 3 = White with purple throat

14. POD COLOR:

☒ 1

1 = Tan 2 = Brown 3 = Black

15. PLANT PUBESCENCE COLOR:

☒ 1

1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

☒ 21 = Slender ('Essex'; 'Amsoy 71')
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

17. PLANT HABIT:

☒ 11 = Determinate ('Gnome'; 'Braxton')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

2 = Semi-Determinate ('Will')

18. MATURITY GROUP:

☒ 1 ☒ 01 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

☒ 2Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☒ 0Bacterial Blight (*Pseudomonas glycinea*)☒ 0Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

☒ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☒ 0

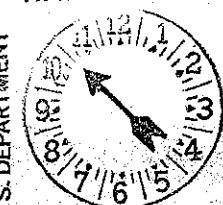
Race 1

☐ Race 2☐ Race 3☐ Race 4☐ Race 5☐ Other (Specify)☒ 0Target Spot (*Corynespora cassicola*)☒ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☒ 0Powdery Mildew (*Microspheera diffusa*)☒ 0Brown Stem Rot (*Cephalosporium greigatum*)☒ 2Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

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OF AGRICULTURE

AMS

PVPO

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

☐ Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)
☐ Purple Seed Stain (*Cercospora kikuchii*)
☐ Rhizoctonia Root Rot (*Rhizoctonia solani*)
 Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
☐ Race 1 ☒ Race 2 ☐ Race 3 ☐ Race 4 ☐ Race 5 ☐ Race 6 ☐ Race 7
☐ Race 8 ☐ Race 9 ☐ Other (Specify) _____

VIRAL DISEASES:

☐ Bud Blight (Tobacco Ringspot Virus)
☐ Yellow Mosaic (Bean Yellow Mosaic Virus)
☐ Cowpea Mosaic (Cowpea Chlorotic Virus)
☐ Pod Mottle (Bean Pod Mottle Virus)
☐ Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)
☐ Race 1 ☐ Race 2 ☒ Race 3 ☒ Race 4 ☐ Other (Specify) _____
☐ Lance Nematode (*Hoplolaimus Colonus*)
☒ Southern Root Knot Nematode (*Meloidogyne incognita*)
☐ Northern Root Knot Nematode (*Meloidogyne Hapla*)
☒ Peanut Root Knot Nematode (*Meloidogyne arenaria*)
☐ Reniform Nematode (*Rotylenchulus reniformis*)
☐ OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ Iron Chlorosis on Calcareous Soil
☐ Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ Mexican Bean Beetle (*Epilachna varivestis*)
☐ Potato Leaf Hopper (*Empoasca fabae*)
☐ Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Coker 368	Seed Coat Luster	Gasoy 17
Leaf Shape	Coker 368	Seed Size	Braxton
Leaf Color	Coker 368	Seed Shape	Braxton
Leaf Size	Coker 368	Seedling Pigmentation	Braxton

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

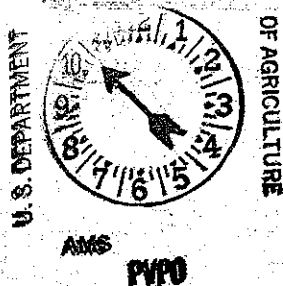
VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	163	1.3	74	7.49	14.07	41.7	19.9	16.3	
Name of Similar Variety Coker 368	164	2.6	80	7.81	13.53	-	-	15.2	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

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Asgrow Seed Company
Plant Variety
Protection Application Soybean A7986
April 1, 1986

EXHIBIT E

A7986 was originated and developed by Dr. Grover Shannon, an Asgrow Plant Breeder. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.